IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No.	:	09/505,735	Confirmation No. 6053
Appellants	:	Alessandro Muti et al.	
Filed	:	02/16/2000	
Group Art Unit	:	2143	
Examiner	:	Joseph E. Avellino	
Title	:	SYSTEM AND METHOD FOR TRANSFERRING DATA OVER A NETWORK	
Atty. Docket No.	:	MFCP.68276	
Customer No.	:	45809	

Via EFS-Web Submission – 10/2/2006

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

APPELLANTS' APPEAL BRIEF

This is an appeal from an Office Action dated 05/03/2006, rejecting claims 1-10 and 12-30. These claims have been at least twice rejected. A Notice of Appeal under 37 C.F.R. § 41.31 was previously filed in the instant application on 01/17/2006, accompanied by the fee set forth in 37 C.F.R. § 41.20(b)(1). Additionally, an Appeal Brief under 37 C.F.R § 41.37 was previously filed on 03/16/2006, accompanied by the fee set forth in 37 C.F.R. § 41.20(b)(2). In response, the Examiner reopened prosecution with a new rejection. Appellants have exercised the right to initiate an appeal from this new rejection by filing a new Notice of Appeal (filed 08/03/2006). Appellants hereby submit this Appeal Brief prior to the two-month deadline of 10/03/2006. The fee set forth in 37 C.F.R. § 41.20(b)(2) previously paid is applied to the present appeal. The Commissioner is hereby authorized to charge any additional fee that may be due, or credit any overpayment, to Deposit Account No. 19-2112.

Contents

I. REAL PARTY IN INTEREST

The real party in interest is MICROSOFT CORPORATION, a corporation of the State of Washington, United States of America.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

Claims 1-10 and 12-30 are pending, and the rejection of each of those claims is being appealed. Claim 11 has been canceled, and claims 29 and 30 were added by amendment.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the Office Action dated 05/03/2006.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The instant Application includes four independent claims: 1, 22, 25, and 28. The present invention is defined by the claims, but summarily, embodiments of the invention are directed to transferring data over a network interface in a manner that minimizes interference with other network activity at that network interface. *See, e.g., Specification*, p. 28, lines 2-11. It is often desirable to transfer new or updated software to users' computers from a remote location over a network (e.g., the Internet). However, because network interfaces for computers have limited bandwidth, conventional methods of transferring new and updated software often interfere with computer users' ability to engage in other network activity. Embodiments of the present invention, among other things, provide for an effective method of transferring data so that interference with other network activity is minimized. *Id.* at p. 2, lines 17-18; p. 12, lines 6-9. Non-limiting examples of data that can be transferred include software updates, text, image, and audio data. *Id.* at p. 20, lines 18-23. Interference is minimized by transferring data at a time when the network bandwidth utilization for the network interface is relatively low. *Id.* at p 12, lines 6-9. More specifically, at least a portion of the data is received over the network at a point

when the actual bandwidth utilization is below a threshold level of utilization, which is calculated as a function of a maximum level of actual bandwidth utilization that has been identified.

Claim 1 (first of four independent claims)

Claim 1 is directed to a method of transferring a set of data over a network. Summarily, the claimed method is directed to monitoring the level of actual bandwidth utilization and calculating a threshold level of utilization below which data may be transferred based on a maximum monitored level. *Id.* at p. 12, lines 10-14. In accordance with the method of claim 1, the level of actual network bandwidth utilization is monitored. *Id.* at p. 14, lines 15-20. A maximum of the monitored level of actual network bandwidth utilization is identified. *Id.* at p. 16, lines 8-12. A threshold level of utilization is then calculated as a function of the maximum monitored level of actual network bandwidth utilization. *Id.* at p. 16, lines 12-17. If the actual level of network bandwidth utilization is less than the threshold level, at least a portion of the set of data is received over the network. *Id.* at p. 17, lines 4-14.

Claim 22 (second of four independent claims)

Claim 22 is directed to a computer-readable medium have stored thereon a data structure. *Id.* at p. 6, line 16 through p. 8, line 9; p. 13, lines 19-23. The data structure includes a first data field containing data representing a maximum monitored level, wherein the maximum monitored level is a maximum of a monitored level of actual network bandwidth utilization. *Id.* at p. 12, lines 10-14; p. 13, line 19 through p. 14, line 2; p. 16, lines 8-12. Additionally, the data structure includes a second data field containing data representing a threshold level of network bandwidth utilization below which data may be transferred over the network without interfering with other network activity, wherein the second data field is derived from the first data field by calculating

the threshold level as a function of the maximum monitored level. *Id.* at p. 12, lines 10-14; p. 13, line 19 through p. 14, line 2; p. 16, lines 12-16.

Claim 25 (third of four independent claims)

Claim 25 is directed to a computer-readable medium having computer-executable components for managing the transfer of data over a network. The components include a bandwidth monitoring component, a threshold calculating component, and a transfer management component. The bandwidth monitoring component monitors the level of actual bandwidth utilization for a network connection and identifies a maximum monitored level, wherein the maximum monitored level is a maximum of the monitored level of actual bandwidth utilization for the network connection. *Id.* at p. 14, lines 15-20; p. 16, lines 8-12. The threshold calculating component calculates a threshold level of utilization as a function of the maximum monitored level of utilization identified by the bandwidth monitoring component. *Id.* at p. 16, lines 12-17. The transfer management component manages the transfer of data over the network when the level of actual bandwidth utilization is less than the threshold level of utilization. *Id.* at p. 17, lines 4-14.

Claim 28 (fourth of four independent claims)

Claim 28 is directed to a method of communicating between a client process and a server process over a network includes: (a) issuing to the server process a first download request which identifies a file and which requests that the server process download a first segment of the file over the network, provided the actual network bandwidth utilization is less than a threshold level below which data may be transferred over the network without interfering with other network activity, wherein the threshold level is calculated as a function of a maximum monitored level, and wherein the maximum monitored level is a maximum of a monitored level of actual network bandwidth utilization (*id.* at p. 17, lines 4-10); (b) downloading, by the server process, the first

segment of the file (*id.* at p. 17, lines 9-10); (c) issuing to the server process a further download request which is associated with the file and which requests that the server process download a further segment of the file over the network, provided the actual network bandwidth utilization is less than the threshold level (*id.* at col. 18, lines 20-21); (d) downloading, by the server process, the further segment of the file (*id.*); and (e) repeating steps (c) and (d) until the server process has downloaded each segment of the file over the network (*id.* at p18, lines 21-22).

VI. GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL

A) Claims 1-9, 14-27, and 29-30 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,913,040 issued to Rakavy et al. (the "Rakavy reference") in view of U.S. Patent No. 6,075,772 issued to Brown et al. (the "Brown reference").

B) Claim 10 stands rejected under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference and the Brown reference and further in view of U.S. Patent No. 6,285,662 issued to Watanabe et al. (the "Watanabe reference").

C) Claim 12 stands rejected under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference and the Brown reference and further in view of U.S. Patent No. 6,427,169 issued to Elzur et al. (the "Elzur reference").

D) Claim 13 stands rejected under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference and the Brown reference and further in view of U.S. Patent No. 6,078,591 issued to Kalkunte et al. (the "Kalkunte reference").

E) Claim 28 stands rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,463,468 issued to Buch et al. (the "Buch reference") in view of the Rakavy reference and further in view of the Brown reference.

Appellants respectfully traverse all these rejections.

VII. ARGUMENT

A) The rejection of claims 1-9, 14-27, and 29-30 under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference in view of the Brown reference should be reversed because the Examiner has failed to establish a *prima facie* case of obviousness.

Initially, Appellants note that for a *prima facie* case of obviousness to be established, three criteria must be met: 1) there must be some suggestion or motivation to modify the reference or to combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the prior-art references must teach or suggest all the claim limitations. *See* MPEP § 2143. Moreover, the teaching or suggestion, and the reasonable expectation of success must be found in the prior art and not be based on applicants' disclosure. *See* MPEP § 706.02(j), § 2142, and § 2143.

Appellants respectfully submit that a *prima facie* case of obviousness has not been established for claims 1-9, 14-27, and 29-30 as will be further set forth below. In particular, the Rakavy and Brown references, either alone or in combination, fail to teach or suggest all the claim limitations for each of these claims. Additionally, there is no suggestion or motivation to combine the Rakavy and Brown references in the manner set forth in the Office Action dated 05/03/2006, nor is there any suggestion or motivation to modify the Rakavy and/or Brown references to achieve the claimed invention.

1) Claims 1-9, 14-21, 29, and 30

As noted above, independent claim 1 is directed to a method of transferring a set of data over a network. In accordance with the method of claim 1, the level of actual network bandwidth utilization is monitored. *Id.* at p. 14, lines 15-20. A maximum of the monitored level of actual network bandwidth utilization is identified. *Id.* at p. 16, lines 8-12. A threshold level of utilization is then calculated as a function of the maximum monitored level of actual network bandwidth utilization. *Id.* at p. 16, lines 12-17. If the actual level of network bandwidth

utilization is less than the threshold level, at least a portion of the set of data is received over the network. *Id.* at p. 17, lines 4-14. Claims 2-9, 14-21, 29, and 30 depend, directly or indirectly, from independent claim 1, and, as such, the arguments set forth below with respect to independent claim 1 are equally applicable to these dependent claims.

The Rakavy reference discusses a type of software technology that is referred to as a "Polite Agent." *Rakavy*, col. 13, lines 5-6. The Polite Agent "transmits information during periods of low line utilization." *Id.* at col. 13, lines 11-12. "Low line utilization occurs when the communications line is busy no more than a predetermined percentage of the time." *Id.* at col. 13, lines 35-36. At a point when "the communications resource utilization remains low and ample resources are available the software agent performs its designated data transfer task." *Id.* at col. 13, lines 23-25.

Although Rakavy's method and the invention of claim 1 address essentially the same problem, there are significant differences between the two approaches with respect to how a threshold below which data may be transferred is established. In particular, the "Polite Agent" software technology discussed in the Rakavy reference uses a predetermined percentage of time that a communications line is busy as a threshold (*see, e.g., Rakavy*, col. 13, lines 35-44), while the invention in claim 1 uses a threshold level calculated based on a maximum monitored level of actual network bandwidth utilization. The Rakavy reference fails to teach or suggest "identifying a maximum monitored level, wherein the maximum monitored level is a maximum of the monitored level of actual network bandwidth utilization" and "calculating a threshold level of utilization as a function of the maximum monitored level of utilization." Following from its failure to teach or suggest calculating a threshold level based on a maximum monitored level of actual network bandwidth utilization, the Rakavy reference necessarily also fails to teach or

suggest the last element: "if the actual level is less than the threshold level, receiving at least a portion of the set of data over the network."

The differences between the approach in the Rakavy reference and the invention of claim 1 are significant. Instead of relying on the percentage of time that a communications line is busy as in the Rakavy reference, the method of claim 1 includes identifying a maximum monitored level of actual network bandwidth utilization and using that maximum monitored level to calculate a threshold level below which data may be received. As such, the invention of claim 1 provides a substantial advantage over the Rakavy reference's solution in that the invention of claim 1 optimizes the use of network bandwidth. By contrast, the Rakavy reference's solution is less effective because downloading data based on the percentage of time the network connection is busy will often result in underutilization of the network bandwidth (as explained in Appellants' specification at page 16, line 18 through page 17, line 1).

The Examiner has acknowledged that the Rakavy reference fails to disclose multiple limitations of the invention of claim 1 (*see, e.g., Office Action dated 05/03/2006*, p. 3), but has minimized the extent of the differences between the Rakavy reference and claim 1. As set forth by the United States Supreme Court in *Graham v. John Deere*, 383 U.S. 1 (1966), inquiries as a background for determining obviousness include, *inter alia*, determining the scope and contents of the prior art, and ascertaining the differences between the prior art and the claims at issue. *See, e.g.*, MPEP § 2141. In the present case, the Examiner has not adequately ascertained the differences between the Rakavy reference and the invention of claim 1. The approach in Rakavy does not involve identifying a maximum monitored level of actual bandwidth utilization, using that maximum monitored level to calculate a threshold level, and transferring data when the actual bandwidth utilization is less than that calculated threshold level. Rather, the Rakavy

reference teaches a different approach based on the percentage of time the network connection is busy. Rakavy's approach is a less effective one for the reasons stated above and in Appellants' specification at page 16, line 18 through page 17, line 1. Thus, the Appellants' claimed invention advances the state of the art beyond what is taught in the Rakavy reference.

The Brown reference was cited by the Examiner in an attempt to demonstrate that the differences between the invention of claim 1 and the Rakavy reference were merely obvious differences. However, the Examiner's conclusion is based on not only an incorrect understanding of claim 1 as noted above, but also an incorrect understanding of what is taught in the Brown reference.

The Brown reference relates to controlling the data rate through a communications adapter for a guaranteed bandwidth connection. *See, e.g., Brown*, Abstract; col. 2, lines 46-50. A maximum threshold value is assigned to the guaranteed bandwidth connection based on the guaranteed bandwidth. *Id.* at Abstract; col. 2, lines 51-55; col. 7, lines 18-24. The maximum threshold value represents the maximum amount of data to be transmitted through the communications adapter for the guaranteed bandwidth connection during a predefined time interval. *Id.* For example, if a guaranteed bandwidth connection is 1.5 Mb/s and the time interval is 0.1 seconds, the maximum threshold value is 150 kb. *Id.* at col. 8, lines 54-57. When data is transmitted for the guaranteed bandwidth connection, the amount of data transmitted through the communications adapter for the guaranteed bandwidth connection is counted. *Id.* at Abstract, col. 2, lines 55-59. Data is not transmitted to the communications adapter if the amount of data would cause the count to exceed the maximum threshold during a time interval. *Id.* at Abstract; col. 2, lines 59-64; col. 8, lines 31-37. Once the time interval expires, the count is reset. *Id.* at Abstract, col. 2, lines 64-65. In an embodiment, the maximum threshold value

may be adjusted to compensate for the actual utilization of the guaranteed bandwidth connection during a previous interval. *Id.* at col. 3, lines 27-48. For example, if the maximum threshold value is 100 kb and only 80 kb were transmitted in an interval, the counter for the next interval may be set at -20 kb to compensate for the underutilization. *Id.* at col. 8, lines 9-12.

The Brown reference simply does not teach or suggest any steps related to "identifying a maximum monitored level, wherein the maximum monitored level is a maximum of the monitored level of actual bandwidth utilization" and "calculating a threshold level of utilization [below which data may be transferred as indicated by the last element of claim 1] as a function of the maximum monitored level of utilization" as recited by claim 1. The Examiner appears to be either misinterpreting the Brown reference or taking what the Appellants have taught in the present application and attempting to read these limitations into the Brown reference. As noted hereinabove, claim 1 is concerned with transmitting data in a manner that minimizes interference with other data transmissions, and, as the threshold for the data transfer is based on the maximum monitored level of utilization, the data transfer can take advantage of otherwise unused bandwidth with minimal impact on other network traffic. In contrast, the Brown reference is not concerned with transmitting data in the background of other data transmissions. Instead, the Brown reference is concerned with a data rate through a communications adapter for a single guaranteed bandwidth connection. As such, the data count is based on data transmission for a single connection and ignores all other data transmissions through the communications adapter.

Additionally, the invention of claim 1 employs a threshold level of utilization at which interference with other network activity caused by a background data transmission will be minimized. In particular, claim 1 sets the threshold level of utilization below an identified maximum monitored level of utilization to ensure that there is sufficient bandwidth to allow

background data transmission while minimizing interference with other data transmissions. In contrast, the maximum threshold level discussed in the Brown reference is a maximum data count for a single guaranteed bandwidth connection and is not concerned with all network activity for a network connection. In some embodiments in the Brown reference, the maximum threshold value may be adjusted based on a previous time interval. For example, the maximum threshold value may be increased to reflect underutilization in a previous time interval. However, this is different from the invention of claim 1 in which a threshold value is determined based on a maximum monitored level of all utilization and used to determine whether a background data transmission may occur with minimal interference with other data transmissions.

Moreover, there is no suggestion or motivation to combine the Rakavy and Brown references, nor is there any suggestion or motivation to modify the Rakavy and/or Brown references to achieve the invention of claim 1. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." *See* MPEP §§ 706.02(j), 2142, and 2143. Factual findings in support of a *prima facie* case of obviousness must be supported by substantial evidence. *In re Zurko*, 59 USPQ2d 1693, 1696 (Fed. Cir. 2001).

> "The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. 'To support the conclusions that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.' *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat App. & Inter. 1985)." MPEP § 2142.

MPEP § 2142 further states that "[w]hen the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper." The Examiner is required to present actual evidence and make particular findings related to the motivation to combine the teachings of the references. *In re Kotzab*, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." *Dembiczak*, 50 USPQ2d at 1617. "'The factual inquiry whether to combine the references must be thorough and searching.'" *In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002) (citing *McGinley v. Franklin Sports, Inc.*, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001)). The factual inquiry must be based on objective evidence of record, and cannot be based on subjective belief and unknown authority. *Id.* at 1433-34. The Examiner must explain the reasons that one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious. *In re Rouffet*, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998).

The Examiner has not presented any evidence why the Rakavy and Brown references would have been combined or otherwise modified to achieve the invention of claim 1. The Examiner's sole rationale for making such a combination is that the disclosure of Rakavy "would motivate one of ordinary skill in the art to search for other methods of bandwidth utilization determining [sic], eventually finding the system of Brown, which would result in a better accommodation of the bursty nature of data transferring." Office Action dated 05/03/2006, p. 4. This statement illustrates not only a lack of understanding as a matter of fact with respect to the teachings of the Rakavy and Brown references but also demonstrates an error as a matter of law. The proper determination for a *prima facie* case of obviousness is whether there is any

suggestion or motivation to modify the references or to combine reference teachings, not whether there is any motivation to search for other teachings. Moreover, the Examiner's statement regarding motivation to search implies that the Examiner has used impermissible hindsight in an attempt to find the claimed invention obvious.

Additionally, although the Examiner also states that the system of Brown "would result in a better accommodation of the bursty nature of data transferring," the Examiner cannot rely on the benefit of the combination without first supporting the suggestion or motivation to make the combination. Such suggestion or motivation does not appear anywhere in either of the references, and the Office Action has not presented any actual evidence in support of the same. Instead, the Office Action relies on broad conclusory statements, subjective belief, and unknown authority. Such a basis does not adequately support the combination of references.

Furthermore, the combination of Rakavy and Brown references is improper as the references teach away from such a combination. "It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)." MPEP § 2145. The Brown reference is concerned with controlling the data rate for a guaranteed bandwidth connection. A guaranteed bandwidth connection necessarily requires that a portion of the available bandwidth be dedicated to the connection, and the threshold value used in the Brown reference is established based on the guaranteed bandwidth. This directly conflicts with the approach in the Rakavy reference in which communication tasks are performed in the background such as to not impose a noticeable overhead. Common sense alone says that controlling a data rate to provide a guaranteed bandwidth for a connection is not particularly relevant to an approach that intentionally prevents any bandwidth from being dedicated to a background transfer and instead tries to minimize the

effect of the background data transmission on other data transmissions. There is clearly no suggestion or motivation to combine two such differing systems. Accordingly, for at least the above-noted reasons, the combination of references is improper and should be reversed.

Appellants also submit that there is no suggestion or motivation to modify the Rakavy reference with the Brown reference because the modification would render the invention in the Rakavy reference unsatisfactory for its intended purpose. "If [a] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)." MPEP § 2143.01. The intended purpose of the system in the Rakavy reference is to transmit information during periods of low line utilization to prevent a noticeable effect on other data transmissions. For example, the Rakavy reference states that "[t]he role of the Polite Agent is to perform communication tasks in the background without imposing a noticeable overhead to the user." Rakavy at col. 13, lines 6-9. The Office Action attempts to modify the Rakavy reference by incorporating the teachings of the Brown reference with the Rakavy reference. As previously indicated, the Brown reference is concerned with controlling the data rate for a guaranteed bandwidth connection. A guaranteed bandwidth connection necessarily requires that a portion of the available bandwidth be dedicated to the connection. As such, the threshold value used in the Brown reference is necessarily determined as to provide this guaranteed bandwidth. Accordingly, the incorporation of the disclosure from the Brown reference into the Rakavy reference suggests using a threshold based on a guaranteed bandwidth such that a portion of the communication line utilization in Rakavy would be dedicated to a guaranteed bandwidth connection for background data transfers. However, the system in the Rakavy reference intentionally prevents any bandwidth from being dedicated to

background transfer and instead tries to minimize the effect of background data transmission on other data transmissions. Accordingly, Appellants respectfully submit that the modification would render the system in the Rakavy reference unsatisfactory for its intended purpose, and thus there is no suggestion or motivation to modify the Rakavy reference by incorporating teachings from the Brown reference.

Similarly, Appellants submit that there is no suggestion or motivation to modify or combine the Rakavy reference with the Brown reference because it would change the principle of operation of the system in the Rakavy reference. "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)." MPEP § 2143.01. The principle of operation of the system in the Rakavy reference is to communicate information in the background of other data transmissions without causing a noticeable interference. To modify the Rakavy reference with the Brown reference would destroy the principle of operation of the Rakavy system because such a combination would require a guaranteed bandwidth connection be established for background data transmissions, thereby directly interfering with other data transmissions. Accordingly, Appellants respectfully submit that the modification would change the principle of operation of the system in the Rakavy reference, and thus there is no suggestion or motivation to modify or combine the Rakavy reference with the Brown reference.

Because the Examiner has failed to establish a *prima facie* case of obviousness of claims 1-9, 14-21, 29, and 30 for at least the reasons described hereinabove, Appellants respectfully request that the Examiner's rejection of these claims be reversed and the claims allowed.

2) Claims 22-24

Referring now to claims 22-24, as noted above, independent claim 22 is directed to a computer-readable medium have stored thereon a data structure. *Id.* at p. 6, line 16 through p. 8, line 9; p. 13, lines 19-23. The data structure includes a first data field containing data representing a maximum monitored level, wherein the maximum monitored level is a maximum of a monitored level of actual network bandwidth utilization. *Id.* at p. 12, lines 10-14; p. 13, line 19 through p. 14, line 2; p. 16, lines 8-12. Additionally, the data structure includes a second data field containing data representing a threshold level of network bandwidth utilization below which data may be transferred over the network without interfering with other network activity, wherein the second data field is derived from the first data field by calculating the threshold level as a function of the maximum monitored level. *Id.* at p. 12, lines 10-14; p. 13, line 19 through p. 14, line 2; p. 16, lines 12-16. Claims 23 and 24 depend from independent claim 22, and, as such, the arguments set forth below with respect to independent claim 22 are equally applicable to these dependent claims.

On page 20 of the Office Action dated 05/03/2006, the Examiner rejected claims 22-24 for "similar reasons as stated above," presumably referring to the rejection of claims 1, 3, and 5 and the combination of the Rakavy and Brown references. Appellants initially submit that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 22-24 because the Rakavy and Brown references, either alone or in combination, fail to teach or suggest all the claims limitations for each of these claims. In particular, the references fail to teach or suggest a computer-readable medium having a data structure as that recited in independent claim 22. First, the Rakavy and Brown references, either alone or in combination, fail to teach or suggest a data structure that includes "a first data field containing data representing a maximum monitored level, wherein the maximum monitored level is a maximum

of a monitored level of actual network bandwidth utilization" as recited by independent claim 22. As noted above with respect to independent claim 1, the Rakavy reference fails to teach anything remotely similar to a maximum monitored level of actual network bandwidth utilization. The Brown reference fails to cure this deficiency as the reference is concerned with a guaranteed bandwidth connection, which is only a portion of the bandwidth for a communications adapter and differs from a maximum monitored level of actual network bandwidth utilization as recited by independent claim 22.

Next, the Rakavy and Brown references, either alone or in combination, fail to teach or suggest a data structure that includes "a second data field containing data representing a threshold level of network bandwidth utilization below which data may be transferred over the network without interfering with other network activity, wherein the second data field is derived from the first data field by calculating the threshold level as a function of the maximum monitored level" as recited by independent claim 22. The threshold used in the Rakavy reference is based on a predetermined percentage of time a communications line is busy as opposed to being calculated as a function of a maximum monitored level. This difference is significant as noted hereinabove and in Appellants' specification at page 16, line 18 through page 17, line 1. The Brown reference also fails to cure the deficiency of the Rakavy reference with respect to this limitation. As previously noted, the Brown reference is concerned with controlling the data rate for a guaranteed bandwidth connection. The Brown reference simply fails to teach or suggest any threshold level of network bandwidth utilization below which data may be transferred without interfering with other network activity. In contrast, the Brown reference specifically discusses setting a threshold such that a portion of the bandwidth of a communications adapter is dedicated to a guaranteed bandwidth connection. This teaching in

Brown directly conflicts with the recitation of claim 22 of a threshold below which data may be transferred over the network without interfering with other network activity. A guaranteed bandwidth necessarily removes bandwidth available for other network activity. Additionally, the Brown reference fails to teach or suggest such a threshold level that is calculated based on a maximum monitored level of actual network bandwidth utilization.

Moreover, there is no suggestion or motivation to combine the Rakavy and Brown references to achieve the invention of claims 22-24 and the combination is improper for at least the same reasons as noted above with respect to independent claim 1.

Because the Examiner has failed to establish a *prima facie* case of obviousness of claims 22-24 for at least the reasons described hereinabove, Appellants respectfully request that the Examiner's rejection of these claims be reversed and the claims allowed.

3) Claims 25-27

Turning now to claims 25-27, independent claim 25 is directed to a computer-readable medium having computer-executable components for managing the transfer of data over a network. The components include a bandwidth monitoring component, a threshold calculating component, and a transfer management component. The bandwidth monitoring component monitors the level of actual bandwidth utilization for a network connection and identifies a maximum monitored level, wherein the maximum monitored level is a maximum of the monitored level of actual bandwidth utilization for the network connection. *Id.* at p. 14, lines 15-20; p. 16, lines 8-12. The threshold calculating component calculates a threshold level of utilization as a function of the maximum monitored level of utilization identified by the bandwidth monitoring component. *Id.* at p. 16, lines 12-17. The transfer management component manages the transfer of data over the network when the level of actual bandwidth utilization is less than the threshold level of utilization. *Id.* at p. 17, lines 4-14. Claims 26 and

27 depend from independent claim 25, and, as such, the arguments set forth below with respect to independent claim 25 are equally applicable to these dependent claims.

On page 20 of the Office Action dated 05/03/2006, the Examiner rejected claims 25-27 for "similar reasons as stated above," presumably referring to the rejection of claims 1, 3, and 5 and the combination of the Rakavy and Brown references. Appellants initially submit that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 25-27 because the Rakavy and Brown references, either alone or in combination, fail to teach or suggest all the claims limitations for each of these claims.

Initially, the Rakavy and Brown references, either alone or in combination, fail to teach or suggest a "bandwidth monitoring component which monitors the level of actual bandwidth utilization for a network connection and identifies a maximum monitored level, wherein the maximum monitored level is a maximum of the monitored level of actual bandwidth utilization for the network connection" as recited by independent claim 25. As noted above with respect to independent claim 1, the Rakavy reference fails to teach anything remotely similar to identifying a maximum monitored level of actual network bandwidth utilization. The Brown reference fails to cure this deficiency as the reference is concerned with a guaranteed bandwidth connection, which is only a portion of the bandwidth for a communications adapter and differs from a maximum monitored level of actual network bandwidth utilization as recited by independent claim 25.

Next, the Rakavy and Brown references, either alone or in combination, fail to teach or suggest a "threshold calculating component which calculates a threshold level of utilization as a function of the maximum monitored level of utilization identified by the bandwidth monitoring component" as recited by independent claim 25. As noted above with respect to independent

claim 1, the threshold used in the Rakavy reference is based on a predetermined percentage of time a communications line is busy as opposed to being calculated as a function of a maximum monitored level. This difference is significant as noted hereinabove and in Appellants' specification at page 16, line 18 through page 17, line 1. The Brown reference also fails to cure the deficiency of the Rakavy reference with respect to this limitation. As previously noted, the Brown reference is concerned with controlling the data rate for a guaranteed bandwidth connection. The Brown reference simply fails to teach or suggest any threshold level of utilization that is calculated based on a maximum monitored level of actual network bandwidth utilization.

Further, the Rakavy and Brown references, either alone or in combination, fail to teach or suggest "a transfer management component which manages the transfer of data over the network when the level of actual bandwidth utilization is less than the threshold level of utilization" as recited by independent claim 25. Because the Rakavy and Brown references fail to teach or suggest a bandwidth monitoring component and threshold calculating component that provide a threshold level based on a maximum monitored level of utilization, the references similarly fail to teach or suggest a transfer management component that employs such a threshold level to manage the transfer of data.

Moreover, there is no suggestion or motivation to combine the Rakavy and Brown references to achieve the invention of claims 25-27 and the combination is improper for at least the same reasons as noted above with respect to independent claim 1.

Because the Examiner has failed to establish a *prima facie* case of obviousness of claims 25-27 for at least the reasons described hereinabove, Appellants respectfully request that the Examiner's rejection of these claims be reversed and the claims allowed.

B) The rejection of claim 10 under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference in view of the Brown reference and further in view of the Watanabe reference should be reversed because the Examiner has failed to establish a *prima facie* case of obviousness.

Claim 10 was rejected under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference in view of the Brown reference and further in view of the Watanabe reference. A *prima facie* case of obviousness has not been established for claim 10 because the Rakavy, Brown, and Watanabe references, either alone or in combination, fail to teach or suggest all the claims limitations for claim 10. Dependent claim 10 depends indirectly from independent claim 1, which includes limitations not taught or suggested by the Rakavy and Brown references as described hereinabove. The addition of the Watanabe reference does not cure these deficiencies as the Watanabe reference similarly fails to teach or suggest these limitations. Further, there is no suggestion or motivation to combine the Rakavy, Brown, and Watanabe references in the manner set forth in the Office Action dated 05/03/2006, nor is there any suggestion or motivation to modify the Rakavy, Brown, and/or Watanabe references to achieve the invention of claim 10. Accordingly, the 103(a) rejection of claim 10 is improper for at least the reasons stated above, and Appellants respectfully request that the Examiner's rejection of claim 10 be reversed and the claim allowed.

C) The rejection of claim 12 under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference in view of the Brown reference and further in view of the Elzur reference should be reversed because the Examiner has failed to establish a *prima facie* case of obviousness.

Claim 12 was rejected under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference in view of the Brown reference and further in view of the Elzur reference. A *prima facie* case of obviousness has not been established for claim 10 because the Rakavy, Brown, and Elzur references, either alone or in combination, fail to teach or suggest all the claims limitations for claim 12. Dependent claim 12 depends indirectly from independent claim 1, which includes

limitations not taught or suggested by the Rakavy and Brown references as described hereinabove. The addition of the Elzur reference does not cure these deficiencies as the Elzur reference similarly fails to teach or suggest these limitations. Further, there is no suggestion or motivation to combine the Rakavy, Brown, and Elzur references in the manner set forth in the Office Action dated 05/03/2006, nor is there any suggestion or motivation to modify the Rakavy, Brown, and/or Elzur references to achieve the invention of claim 12. Accordingly, the 103(a) rejection of claim 12 is improper for at least the reasons stated above, and Appellants respectfully request that the Examiner's rejection of claim 10 be reversed and the claim allowed.

D) The rejection of claim 13 under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference in view of the Brown reference and further in view of the Kalkunte reference should be reversed because the Examiner has failed to establish a *prima facie* case of obviousness.

Claim 13 was rejected under 35 U.S.C. § 103(a) as being obvious over the Rakavy reference in view of the Brown reference and further in view of the Kalkunte reference. A *prima facie* case of obviousness has not been established for claim 13 because the Rakavy, Brown, and Kalkunte references, either alone or in combination, fail to teach or suggest all the claims limitations for claim 13. Dependent claim 13 depends indirectly from independent claim 1, which includes limitations not taught or suggested by the Rakavy and Brown references as described hereinabove. The addition of the Kalkunte reference does not cure these deficiencies as the Kalkunte reference similarly fails to teach or suggest these limitations. Further, there is no suggestion or motivation to combine the Rakavy, Brown, and Watanabe references in the manner set forth in the Office Action dated 05/03/2006, nor is there any suggestion or motivation to modify the Rakavy, Brown, and/or Watanabe references to achieve the invention of claim 13. Accordingly, the 103(a) rejection of claim 13 is improper for at least the reasons stated above,

and Appellants respectfully request that the Examiner's rejection of claim 13 be reversed and the claim allowed.

E) The rejection of claim 28 under 35 U.S.C. § 103(a) as being obvious over the Buch reference in view of the Rakavy reference and further in view of the Brown reference should be reversed because the Examiner has failed to establish a *prima facie* case of obviousness.

The Buch reference discloses a technique for free Internet access which involves a method for downloading video advertising files when a user is not actively using the Internet connection. As shown in FIG. 11 and described at column 12, Buch's method determines the ad block size based on the available data rate and perhaps also based on system resources. If the Internet connection is being used (e.g., to download content or to send/receive email), the method checks the availability of the connection again later. However, if the Internet connection is not being used, a request is sent to the ad server for information such as the file name, the offset from the file start where the block should be downloaded, and the determined ad block size.

The method in the Buch reference differs from that of Appellants' invention of claim 28 in that Buch's method does not request and download data in the background during other network activity. The method in the Buch reference does not request and download data provided that the actual network bandwidth utilization is less than a threshold level that is calculated as a function of a maximum monitored level of actual network bandwidth utilization. Instead, the method in the Buch reference only requests and downloads data when the user is not actively using the Internet connection. These are substantial differences because the downloading of data using the invention of claim 28 is not limited to times when the user's Internet connection is not being actively used as discussed in the Buch reference. This is a significant difference as the invention of claim 28 provides a benefit over the method in the Buch

reference in that data may be downloaded while other network activity occurs. The Examiner acknowledges that the Buch reference fails to teach or suggest multiple limitations of independent claim 28 (*see, e.g., Office Action dated 08/19/2005*, p. 11), but minimizes the extent of the differences between the invention of claim 28 and the Buch reference as noted above.

The Rakavy and Brown references were relied on by the Examiner in an attempt to demonstrate that the differences between the invention recited by claim 28 and the Buch reference are merely obvious differences. However, the Examiner's conclusion is based on not only an incorrect understanding of Appellants' invention of claim 28 with respect to the Buch reference as noted above, but an incorrect understanding of what is taught by the Rakavy and Brown references. As noted above with respect to the obviousness rejection of claims 1-9, 14-27, and 29-30, the Rakavy and Brown references, either alone or in combination, fail to teach or suggest using a threshold level of utilization that is calculated based on an identified maximum monitored level of actual bandwidth utilization. Accordingly, the Buch, Rakavy, and Brown references, either alone or in combination, fail to teach or suggest the method of claim 28. Moreover, there is no suggestion or motivation to combine the Buch, Rakavy, and Brown references in the manner set forth in the Office Action dated 05/03/2006, nor is there any suggestion or motivation to modify the Buck, Rakavy, and/or Brown references to achieve the invention recited by claim 28. Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness for independent claim 28. As such, the 103(a) rejection of independent claim 28 is improper and should be reversed and the claim should be allowed.

F) Conclusion

Because the Examiner has failed to establish a *prima facie* case of obviousness for claims 1-10 and 12-28 for at least the reasons cited hereinabove, Appellants respectfully request that the rejection of the claims be reversed and the claims allowed.

Respectfully submitted,

/Patrick A. Lujin/

Patrick A. Lujin
Reg. No. 35,260

SHOOK, HARDY, & BACON L.L.P.
2555 Grand Blvd.
Kansas City, MO 64108-2613
Tel.: 816/474-6550

CLAIMS APPENDIX

1. A method of transferring a set of data over a network, the method comprising:

monitoring the level of actual network bandwidth utilization;

identifying a maximum monitored level, wherein the maximum monitored level is a maximum of the monitored level of actual network bandwidth utilization;

calculating a threshold level of utilization as a function of the maximum monitored level of utilization; and

if the actual level is less than the threshold level, receiving at least a portion of the set of data over the network.

2. The method of claim 1, wherein a client receives the data over the network from a server.

3. The method of claim 2, wherein said monitoring occurs at the interface between the client and the network.

4. The method of claim 1, wherein the network is the Internet.

5. The method of claim 1, wherein the threshold level is equal to a predetermined percentage of the maximum monitored level.

6. The method of claim 1, wherein the set of data includes a software update.

7. The method of claim 1, further comprising repeating at least said monitoring step each time a portion of the set of data is received.

8. The method of claim 7, wherein said receiving step includes separately receiving a plurality of discrete portions of the set of data over the network when the actual level is less than the threshold level.

9. The method of claim 8, further comprising incrementing a counter each time a discrete portion of the data is received over the network.

10. The method of claim 9, wherein the size of the discrete portions of the data is a function of the value of the counter.

11. (Canceled)

12. The method of claim 9, further comprising clearing the counter after receiving all of the plurality of discrete portions of the data over the network.

13. The method of claim 9, further comprising clearing the counter if the level of actual utilization becomes greater than the threshold level.

14. The method of claim 8, further comprising suspending the receipt of discrete portions of the data if the level of actual utilization becomes greater than the threshold level.

15. The method of claim 14, further comprising resuming the receipt of discrete portions of the data from the point of suspension when the level of actual utilization becomes less than the threshold level.

16. The method of claim 1, further comprising:

repeating said monitoring step each time a portion of the set of data is received;

identifying a maximum level of utilization during receipt of the set of data; and

calculating a threshold level of utilization for the set of data as a function of the maximum level of utilization identified during receipt of the set of data.

17. The method of claim 16, wherein said identifying step includes estimating the maximum level of utilization during receipt of the set of data by calculating an average level of utilization for the set of data upon repeating said monitoring step a predetermined number of times during receipt of the set of data.

18. The method of claim 16, further comprising receiving at least a portion of the set of data over the network if the actual level is less than the threshold level for the set of data.

19. The method of claim 16, further comprising receiving at least a portion of a second set of data over the network if the actual level is less than the threshold level for the set of data.

20. A computer-readable medium having computer-executable instructions for performing the method recited in claim 1.

21. A computer system having a memory, an operating system and a central processor, said processor being operable to execute the instructions stored on the computer-readable medium of claim 20.

22. A computer-readable medium having stored thereon a data structure, comprising:

a first data field containing data representing a maximum monitored level, wherein the maximum monitored level is a maximum of a monitored level of actual network bandwidth utilization; and

a second data field containing data representing a threshold level of network bandwidth utilization below which data may be transferred over the network without interfering with other network activity, wherein said second data field is derived from said first data field by calculating the threshold level as a function of the maximum monitored level.

23. The computer-readable medium of claim 22, wherein the threshold level is calculated as a predetermined percentage of the maximum monitored level.

24. The computer-readable medium of claim 22, wherein the actual network bandwidth utilization is monitored at an interface between a client machine and the network.

25. A computer-readable medium having computer-executable components for managing the transfer of data over a network, comprising:

a bandwidth monitoring component which monitors the level of actual bandwidth utilization for a network connection and identifies a maximum monitored level, wherein the maximum monitored level is a maximum of the monitored level of actual bandwidth utilization for the network connection;

a threshold calculating component which calculates a threshold level of utilization as a function of the maximum monitored level of utilization identified by said bandwidth monitoring component; and

a transfer management component which manages the transfer of data over the network when the level of actual bandwidth utilization is less than the threshold level of utilization.

26. The computer-readable medium of claim 25, wherein the network connection is an interface between a client machine and the network.

27. The computer-readable medium of claim 25, wherein the threshold level is calculated as a predetermined percentage of the maximum monitored level.

28. A method of communicating between a client process and a server process over a network, the method comprising:

(a) issuing to the server process a first download request which identifies a file and which requests that the server process download a first segment of the file over the network, provided the actual network bandwidth utilization is less than a threshold level below which data may be transferred over the network without interfering with other network activity, wherein the threshold level is calculated as a function of a maximum monitored level, and wherein the maximum monitored level is a maximum of a monitored level of actual network bandwidth utilization;

(b) downloading, by the server process, the first segment of the file;

(c) issuing to the server process a further download request which is associated with the file and which requests that the server process download a further

segment of the file over the network, provided the actual network bandwidth utilization is less than the threshold level;

(d) downloading, by the server process, the further segment of the file; and

(e) repeating steps (c) and (d) until the server process has downloaded each segment of the file over the network.

29. The method of claim 1, wherein a client machine receives the data over the network without substantially interfering with the ability of a user of the client machine to engage in other network activity.

30. The method of claim 1, wherein the data is received over the network without substantially interfering with any other network activity.

EVIDENCE APPENDIX

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), submitted herewith are copies of any evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellants in the appeal.

NONE

RELATED PROCEEDINGS APPENDIX

Pursuant to 37 C.F.R. § 41.37(c)(1)(x), submitted herewith are copies of decisions rendered by a court or the Board in any proceeding identified in Section II pursuant to 37 C.F.R. § 41.37(c)(1)(ii).

NONE